REMARKS

Claims 42-58 are currently pending. Applicants respectfully request entry of the foregoing changes to independent claims 42 and 57, which have been implemented in light of the Examiner's newly implemented rejection under 35 U.S.C. § 101.[1]

It is noted that this rejection appears to have been provoked by a change in the U.S. Patent and Trademark Office's (PTO's) position regarding the patent-eligibility of computer-implemented methods in response to the issues surrounding In re Bilski, 545 F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008), although the Court in this instance expressly stated that this case did not touch on the patentability of computer-implemented methods. Noting that this rejection could have been made to the claims as they existed at the time of the last Office Action had the PTO's position been earlier established, Applicants respectfully note that the finality of the rejection is premature and would ask that under the circumstances that the foregoing changes to the claims be entered.

It is also noted that these changes remove the grounds of rejection under 35 U.S.C. § 101, and therefore either place the application in condition for allowance under the presently articulated position of the U.S. Patent and Trademark Office with respect to patent-eligible subject matter, or at least place the claims in better form for appeal. As such, entry of these changes is appropriate, for at least these reasons, and as further explained below.

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[1] The proposed change to claim 43 is a non-substantive change proposed to improve readability. It is understood that the Office does not generally deny entry of this types of minor changes.

The Office Action includes a rejection of claims 42-49, 57 and 58 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicants respectfully disagree.

Though it is not clear that the Court's will agree with PTO's current position on patent-eligible subject matter of computer implemented, under the tests articulated in the Office Action at page 2, "[t]o qualify as a statutory process, the claim should positively recite [another] statutory class to which it is tied, for example by identifying the apparatus which accomplished the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state." As articulated above, the claims are now more expressly tied to a computer, although the preamble of the claim in its unamended form was directed to a computer-implemented method. A computer that has been programmed to carry out the functions cited in the process of independent claims 42 and 57 is a uniquely configured apparatus (insofar as a processor when compiled with software to carry out a function becomes uniquely implemented apparatus for carrying out those functions), the claims are now clearly statutory in nature even under the PTO's current views.

In light of the foregoing, Applicants respectfully submit that the claims are statutory in nature and respectfully request both entry of the Amendment and withdrawal of this rejection.

The Office Action includes a rejection of claims 42-58 under 35 U.S.C. § 103 as allegedly being unpatentable over Morgan et al. (U.S. Patent No. 5,799,286) in

view of Ulwick (U.S. Patent No. 6,115,691), and in further view of newly cited Myers (U.S. Publication No. 2002/0198808). This rejection is respectfully traversed.

As an initial comment, Applicants appreciate the Examiner's withdrawal of the rejection of claims 42-56 as allegedly being unpatentable over Morgan et al. in view of Ulwick and in further view of Bruce (U.S. Publication No. 2002/0049621). The Office was in apparent agreement that this combination of references did not meet the claim recitations. However, the Office apparently views Myers as curing the deficiencies of the earlier rejection, which by and large is identical to the previous rejection other than the citation to Myers for what had been previously attributed to Bruce.

Applicants respectfully disagree as to the conclusions drawn in the Office Action. In summary, Applicants respectfully submit that Myers does not cure the deficiencies of the earlier rejection.

For the convenience of the Office, many other comments previously presented regarding Morgan and Ulwick will be reproduced below in altered form. The previous comments are incorporated by reference to the degree appropriate for the change in circumstance.

Morgan et al.

Morgan et al. is directed to an automated activity-based management system. More specifically, it is an example of an automated, activity-based management system in which traditional ledger accounting information and human resources information is used with other information directed to activities, equipment usage, and facility utilization to generate costs associated with activities performed by an

organization, as described in the first two pages of the originally filed application. The traditional accounting information and activity information are fed into a relational database. The information is processed and the costs associated with the employee, facilities, equipment and overhead components of activities are computed. User-defined reports for trending, forecasting, comparison, benchmarking and budgeting processes can be generated.

As characterized in the Office Action, Morgan does not "explicitly disclose that the method [has a step of] establishing in a computer a relationship between various drivers by *representing each non-bridge variable driver* in terms of *one or more of said bridge variables only*; using said relationship, representing each of said activities at least as a function of one or more of said bridge variables, *thereby reflecting interdependence between said activities*; and generating a model of said process at least as a function of said bridge variables by combining representations of *all activities* comprising said process." (Emphasis added.) The Office suggests that these features are known in the art as evidenced by Ulwick (and presumably Myers).

Ulwick

Specifically, the Office suggests that Ulwick discloses a method of "establishing a relationship between various drivers by representing each non-bridge variable driver in terms of one or more of said bridge variables only," citing to column 1, lines 41-67, column 2, lines 1-12, column 3, lines 27-67, and column 9, lines 5-17.

The undersigned has read Ulwick in detail and respectfully submits that it, whether viewed alone or in combination with Morgan and Myers, does not teach the

features for which it is asserted and which now appear in the claims. Specifically, Ulwick is described as providing individuals and businesses with the ability to evolve decision making by taking into account more variables that affect a decision. It does not specifically address a supply-chain environment or any process as defined in the claims, *i.e.,* a process being a series of activity wherein an input of at least one subsequent activity is dependent on a result of at least one previous activity. By way of non-limiting example of the present disclosure, this process can involve loading a truck with produce, delivering the produce via the truck, unloading the produce at the delivery point, and utilizing the produce at the delivery point. In marked contrast, as shown in the various figures of Ulwick, a group of desired outcomes are identified, *e.g.,* having a two-way portable radio that can "maintain a charge for a full day of activity" being identified as a target benefit. This benefit is then weighted against other types of desires such as shown in Figures 5 and 6, for instance. Figure 6 mentions the use of "predicted matrices", which are described for instance at page 6, lines 58-63 and in great detail starting at column 16, line 16 *et seq.* Specifically, column 16 identifies a finite set of predicted matrices for a given application. More specifically, it is stated that:

> Predictive metrics are measurable parameters that predict a desired outcome will occur. A single predictive metric is defined for each desired outcome; however, as each metric may predict, to some extent, the satisfaction of more than one desired outcome, each metric is assigned a predictive relationship value for each desired outcome depending upon the degree with which that metric predicts satisfaction of that particular desired outcome. Accordingly, each predictive metric is also assigned a cumulative predictive value which represents the strength of the predictive metric with which represents the strength of the predictive metric with respect to the degree to which the predictive metric predicts satisfaction of all of the prioritized desired outcomes.

> The predictive metrics are formulated by market or industry research, and, once formulated, are organized into a computer database. Once collected and organized, the data is loaded into the software prior to delivery to the user. FIG. 19 illustrates actual data wherein desired outcomes are listed down the left hand column (nos. 1-26) and corresponding predictive metrics are listed from left to right across the top (nos. 1-26). This data was obtained for an internal customer set (management) in connection with a mission involving the process of business. Note as seen in FIG. 19 for each desired outcome there is a corresponding predictive metric established which strongly predicts (strength of prediction indicated by solid circle) delivery of the desired outcome. In addition each metric is assigned a predictive value relative to each desired outcome. In the data shown in FIG. 19 the ability of each predictive metric to predict the success of each desired outcome is indicated by strong, moderate, and weak indicators which are graphically represented by a solid circle, a circle, and a triangle respectively, which correspond to numerical values (9, 3, and 1, respectively)."

What is interesting to note about this description, particularly in the context of the overall disclosure in Ulwick, is that the predictive matrices may be used for predicting the desired outcome in some weighted fashion, but each predictive matrices is used for a direct correlation to the desired outcome. Stated differently, the predictive matrices can have a one-to-several correlation, but it is a direct correlation between the predictive matrix and the desired outcome.

In notable contrast, the present application discloses a system where drivers associated with activities can have an established relationship based on "bridge variables," that is variables that are shared among drivers, with a patentable difference between the present method and system and the applied art being that the bridge variable is usable in sequential activities. For instance, using part of the example in the present specification, the average volume of cases (*e.g.*, cases of

produce) can be used to identify cost of various activities, wherein the activities are each dependent on a previous activity, such as in a supply-chain environment.

For instance, the variable d can be used in the variable costs VC and fixed costs FC of transportation, but also in inventory storage and other components of a supply chain. As identified at page 10 of the original disclosure, these fixed and variable costs of can be added up to determine the total costs of a supply chain, for example. The various bridge variables can then be manipulated to determine if the total costs, taking into consideration other constraints, for instance, can be optimized.

The Hypothetical Combination Does Not Meet the Claim Recitations

To put it in more abstract sense, Ulwick whether or not taken in hypothetical combination of Morgan et al and Myers, only takes into consideration a single cause and effect sequence, i.e., a flat one dimensional evaluation, whereas the disclosed process of the present application can take into consideration a sequence of causes and effects, particularly ones that have common variables or bridge variables, to derive the total cost of a sequence of such cause and effect activities, a multi-dimensional evaluation.

It is respectfully submitted that this distinction is reflected in the independent claims when one reads the claims in their entirety. For instance, claim 42 recites:

> A computer-implemented method of managing a process, said computer implemented method comprising:
>
> identifying activities that comprise the process, wherein the process is a series of activities, wherein an input of at least one subsequent activity is dependent on an output of at least one previous activity;
>
> identifying drivers associated with at least one metric, reflecting an efficiency of said process, for each of the activities;

> *identifying, in a computer, bridge variables from said identified drivers, wherein each bridge variable is a driver that is relevant to more than one of said activities*;
>
> *establishing, in a computer, a relationship between various drivers by representing at least one non-bridge variable driver in terms of one or more of said bridge variables;*
>
> *using said relationship, representing activities at least as a function of one or more of said bridge variables, thereby reflecting interdependence between said activities to represent the entire series of activities of said process;*
>
> *generating, in a computer, a model of said process at least as a function of said bridge variables by combining representations of activities comprising said process*; and
>
> outputting, from said model, in a computer, a predictive metric reflecting an efficiency of the total process. (Emphasis added.)

Here, it should be noted that cost may not be the metric to be optimized, but the overall system is to optimize a metric reflecting an efficiency of the total process, and the model is of the process of this series of activities wherein subsequent activities are dependent on a result of at least one previous activity, such as is evident in a supply chain environment.

In this manner, the complex and seemingly unmanageable and unpredictable complexities of a supply chain can be quantified to result in an optimized parameter such as costs for the total system. Previously, as described in the present application, these decisions were localized. The same is true of Ulwick where the weighted results are decided by various individuals as to their prospective and weighted. Ulwick purports to give a measure of all these parameters together in some form of graphic, and Ulwick does not reflect a complexity of having a bridge variable that affects activities, wherein the activities can be dependent on previous activities such that there is a two-dimensional complexity, *e.g.,* the bridge variable being one complexity and the interdependency of subsequent and/or former steps being another complexity, is neither anticipated nor suggested, nor is there any

reason to think that one skilled in the art would modify the applied art in a manner to reflect this feature. Both the features of the present claims and the potential advantages it can produce in certain scenarios are not appreciated and not captured by the prior art. Stated differently, the present invention is both novel and unobvious over the applied art.

The other claims add features which also remove the present invention from the prior art. By way of example, new independent claim 57, recites *inter alia,* "identifying drivers associated with at least one metric, reflecting an efficiency of said process, for each of the activities, wherein identifying said drivers includes identifying at least one of fixed components and variable components of each said driver", and dependent claim 49 has similar recitations. Fixed costs and variable costs are common accounting numbers, but the prior art does not use fixed and variable components (e.g., costs per claim 58) with reference to individual cost drivers. Col. 17, lines 30-43, of Ulwick is cited for meeting the recitations of claim 49, but this passage mentions that a universe of solutions is treated as a variable, but it is respectfully submitted that this concept does not meet the present claim recitations. Morgan et al. identifies that total cost attributable to an activity has four components, at column 5, lines 51-55, but the people, facilities, equipment and overhead, each have fixed and variable costs, and Morgan et al. does not go to this level of detail.

Myers

It is noted that Myers was added for allegedly providing evidence that the step of outputting, from a model, a predictive cost for a process, is known in the art. Even if this were the case, it is respectfully submitted that the combination of Ulwick,

Morgan et al and Myers does not teach or suggest the present invention for at least the reasons given above.

Myers is actually directed to supply chain financing. While it incidentally discloses some aspects of supply chains, it must be emphasized that Myers is primarily directed to a completely different aspect of the issues surrounding supply chains. To highlight the differences, the following comparison of the present application for the prior art citations is offered. It is noted that as to the left hand column of the table, the brief description of features and advantages of the disclosed system may not be expressly or implicitly recited in each claim and that by the nature of the abbreviated identification of the features does not serve to limit the invention to those brief identifying descriptions. Instead, reference to the claims is necessary. This table illustrates, however, that even in combination, Morgan et al, Ulwick and Myers, alone or in combination, does not meet the recitations, nor does it have the advantages of the present invention.

Comparison of SCA Patent with Prior Art Citations

	Ulwick	Morgan	Myers	Combination of Ulwick, Morgan & Myers	Present Exemplary Embodiments
Uses activity-based management		X		X	X
Establishes need for a computer-based automated system		X		X	X
Ability to assess activities and costs in an existing situation		X		X	X
Ability to assess activities and costs for any future scenario (changes in volume, customers etc)					X
Establishes need for metrics to evaluate supply chain	X			X	X

	Ulwick	Morgan	Myers	Combination of Ulwick, Morgan & Myers	Present Exemplary Embodiments
Teaches how to calculate predictive metrics for any future scenario (changes in volume, customers etc)					X
Discusses the need for coordination and management across supply chain			X		X
Teaches how to establish connectivity and coordinate across different supply chain activities					X
Uses bridge variables to establish connectivity between activities					X
Integrates operations and financial modeling					X
Dynamic model (As demand, product mix and other attributes change, the model dynamically updates all other activities and drivers, automatically updating total system cost)					X

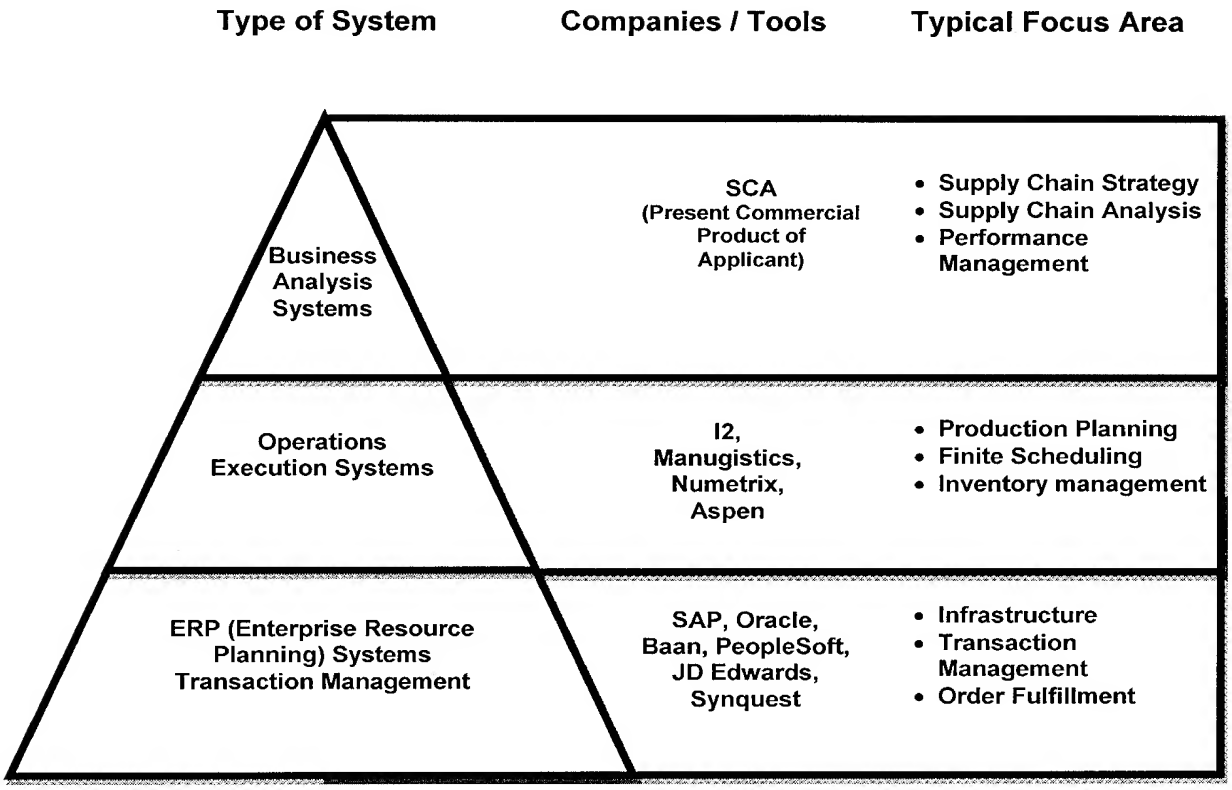
In terms of claim language, it is noted that the combination does not teach the concept of bridge variable and in fact does not even go to the concept of dynamic use or optimizing the supply chain. The exemplary embodiment of the present invention and exemplary embodiments can be used to convert operational data into a cost statement that results from the total dynamic supply chain variations. The current application can accurately calculate plant capacities and capabilities, and thereby provide an indication of the impact of one product's demand on another product's production and costs.

With respect to Myers, it is noted that it discloses in broad brush to the idea of providing strong and/or large participants in a supply chain the opportunity to more effectively coordinate and manage supply chain activities in paragraph [0019] and elsewhere. In paragraph [0023], it mentioned that the Myers system can provide

additional capital to be used to address an individual supplier's internal systemic problems and also, in paragraph [0032], key participants (which by definition are difficult to replace in a supply chain) are identified using data related to the potential key or strategic participant needs to gathered and calculated for a number of items across an extended time period. These items can include the prices of items purchased, the delivery times, lead times, product cycles, mean time before failure, warranty claims, non-conforming deliveries, defects, profit margins, cash flows, economic value added, cash value added, labor productivity, capital productivity, net income, percentage of sales to supply chain, technology, innovation rate, innovation capability, and flexibility, among other factors. While these factors are all invocative of parameters measured in a supply chain, it nevertheless does not teach, suggest or disclose the concept of using "establishing a relationship between various drivers by representing at least one non-bridge variable driver in terms of one or more of the said bridge variables; using said relationship, representing activities at least as a function of one or more of said bridge variables, thereby reflecting interdependence between said activities to represent the entire series of activities in said process; [and] generate a model of said process at least as a function of said bridge variables by combining representations of activities comprising said process" as articulated in claim 42, among other features of the claims.

Another way to view this is that Morgan et al., Ulwick and Myers represent various components of a supply chain management system, but does not provide the features or functions of the present invention, which sits atop them. To facilitate an understanding of this, the following charge representing the hierarchy of supply chain applications currently commercially available is provided below.

Hierarchy of Supply Chain Applications



As can be seen, Applicants fully appreciate the commercial offerings which are identified in Myers as paragraphs [0059] through [0061] as well as others. Hopefully the foregoing hierarchy of supply chain software applications will assist the Examiner in understanding why the types of products mentioned in paragraphs [0059]-[0061] of Myers only touch on the management across a supply chain, but do not achieve the features or functions of the presently recited invention. The presently claimed invention adds functionality not seen in the applied prior art of other commercial offerings as identified above.

In light of the foregoing, Applicant respectfully requests reconsideration and allowance of the present application. Should any residual or new issues arise, the Examiner in invited to contact the undersigned at the number listed below.

Respectfully submitted,

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